Request for Information Response

for

Arkansas Health Information Exchange

May 3. 2010

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Monty Faidley, Program Manager
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Attn: Alison Nichols

Arkansas State Health Alliance for Records Exchange
Coordinator for Health Information Technology

Dear Ms. Nichols,

LexisNexis is pleased to present this response to the Arkansas State Health Alliance for Records Exchange (SHARE), Request for Information on Health Information Exchange (HIE). LexisNexis offers Arkansas SHARE innovative solutions for addressing your key HIE requirements including

- Creating and Maintaining a Master Patient Index
- Creating and Maintaining a Provider Index and Directory
- Electronically Verifying the Identity of Patients and Providers
- Securing Access to a Web-Based Portal

As the industry leader in matching records across disparate data sets, LexisNexis manages over 585 Million unique identities from 20,000 data sources across 33 Billion records on a daily basis. LexisNexis' award-winning data linking technology is used by tens of thousands of State, Local and Federal Agencies across the United States, supporting millions of daily transactions with sub-second response times.   This data linking technology at the core of the LexisNexis solutions is a strong fit with the Master Patient Index and Provider Directory required for a successful HIE solution.
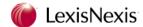
LexisNexis is also an industry leader in Identity Management, offering an integrated system of business processes, policies and technologies that will enable SHARE to facilitate and control Provider and Patient access to critical health information, while protecting confidential personal information from unauthorized users and securing access to the Provider Portal. This powerful verification technology allows SHARE to be confident in the identity of Patients and Providers prior to allowing access to the HIE.

LexisNexis looks forward to working with SHARE to define and implement the requirements of the Arkansas HIE, resulting in a secure exchange of health records with strict limits on meaningful use and ultimately better outcomes for Arkansas patients.

Regards,

Kent Stucki
Strategic Account Manager

LexisNexis Risk Solutions
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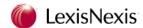(P) (214) 418-0937 (F) (866) 960-4318

LexisNexis Overview

LexisNexis, a preeminent information and technology solutions provider to business and government organizations around the world, has developed a number of solutions to address the key challenges of Health Information Exchange: Entity Resolution, Provider Maintenance, and Identity Management / Authorization. These solutions leverage the company's 30 years of experience in licensing, normalizing, and managing enormous troves of digital information. The data processing capabilities of LexisNexis' scalable Data Analytics Supercomputer (DAS) technology include algorithmic experience gained from applying technology to massive collections of public and open source information.

LexisNexis is the largest and fastest growing data repository of public records and commercially available data in the country. Our vast data storehouse contains in excess of 33 billion records drawn from 20,000 disparate sources that map to 585 million unique identities.   LexisNexis solutions are based on our comprehensive public records database and our patented technology called Link ID which uniquely identifies individuals.

LexisNexis technology provides a comprehensive set of solutions and tools to identify, authenticate, verify and alert Government Agencies on the status of individuals. For over 30 years, LexisNexis has been a trusted source and leading provider of decision-making information that help Social Services agencies such as the Arkansas State Health Alliance for Records Exchange (SHARE). LexisNexis is the premier provider of decision-making intelligence solutions to businesses and government. Through numerous successful implementations, LexisNexis has developed significant expertise in providing data-driven solutions to Social Services Agencies, with solutions deployed in Arkansas, Texas, California, Georgia, Massachusetts, Florida and across the United States.

LexisNexis' decision to focus on Health Information Exchange has resulted in a suite of industry leading products and an experienced, dedicated Team focused on researching, developing and delivering significant value, measured in real-dollar return on investment, to our Health Care Customers and their Integrator Partners.

Mandatory Response Requirements

Name and Category of Respondent
LexisNexis Risk Solutions
Software Vendor, Service Provider

Name of Vendor Representative
Monty Faidley
Program Manager

LexisNexis Risk Solutions
1593 Bubbling Creek Road NE
Suite 700
Atlanta, GA 30319

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Summary Description of Solution
LexisNexis offers SHARE innovative solutions for addressing key HIE challenges including
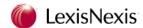- Creating and Maintaining a Master Patient Index
- Creating and Maintaining a Provider Index and Directory
- Electronically Verifying the Identity of Patients and Providers
- Screening of Practitioners and Providers for Red Flag issues
- Securing Access to a Web-Based Portal

Creating and Maintaining a Master Patient Index
The key function of a Master Patient Index is to uniquely identify each Patient and to match that Patient with their individual health records. This unique identification answers questions such as **"Is this Bob Jones the same as this Robert Jones?"** and **"Does this health record belong to Bob Jones or Robert Jones?"** In order to meet HIPAA, HiTech, and other regulations, these critical entity resolution questions must be answered accurately and correctly.

LexisNexis has a number of advantages in the area of entity resolution that, when taken in combination, allow LexisNexis to provide a solution with a level of sophistication unique in the industry. No other solution provider has the experience, reference data, algorithms and tools that LexisNexis has created.

Although there are many technologies and proposed solutions to the linking challenge of creating a master index, very few have been vetted against more than one real world dataset, and virtually none have been vetted against as diverse a set as the one LexisNexis maintains. Currently, LexisNexis' algorithms are used to link information from over 20,000 diverse data sets, with record counts measured in the billions. LexisNexis has extensive historical reference information about both people and businesses that provides a baseline of information to

understand how people and businesses change their identity over time. This information not only provides immense real-world insight into linking massive collections of disparate data, but also provides an invaluable vetting tool to hone LexisNexis' algorithms.

LexisNexis' patent pending algorithms perform sophisticated matching processes that leverage data in three distinct, yet complementary ways:

1. Matching based on the facts in the entity reference records (i.e. matching names, addresses, phone numbers, etc.).

2. Modifying matching criteria based upon measured statistics about name frequencies, their geographic distributions, the number of residents units at an address and other parameters that allow the matching criteria to be adapted to the specific set of records being linked.

3. Disambiguating links by using associations with other entities (there are many John Smiths's, but very few that have ever lived at the same address as Collette Smith over the past 10 years).

Many vendor solutions are based solely upon the first type of linking algorithm. LexisNexis entity resolution is differentiated by its ability to leverage the statistical measurements in the entity domain and the associations that are present in the data.
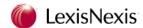
Creating and Maintaining a Provider Index and Directory

The Master Provider Directory will be established and maintained in much the same way as the Master Patient Index, by leveraging Link ID numbers already present in the LexisNexis data repository to uniquely identify Providers.   Labs, Hospitals, RHIOs and other Medical Service Providers can submit Provider lists for inclusion in the HIE, which will be identified and provided a Link ID. This approach allows for simple updates to Provider information, and automated updates on information contained in the LexisNexis demographic and licensing repositories.

LexisNexis has nationwide demographic and licensing information on Medical Providers including data such as
 - National Provider Identifiers and DEA Numbers
 - Licensing Status and Sanctions with Details
 - HHS OIG and GSA Exclusions
 - Name, SSN, DOB
 - Current / Best Contact Information (Phone and Address)
 - Hospital Affiliations and Group Practices
 - Association with Known Fraudsters/Excluded Providers
 - Corporate Officers/Registered Agents

Additional information such as Physician Specialty and Board Certification can be appended using the Link ID as the unique identifier, as well as links to multiple practice locations, and Arkansas State Medical Board Licensing information.

Electronically Verifying the Identity of Patients and Providers, and Security Access to a Web-Based Portal

One of the key drivers for expanded utilization of health information exchange will be the ability for Providers and Patients to trust the system to keep their information secure and deliver accurate results. These elements cannot be met merely through strong encryption, proper protocols, or traditional data matching methods. An enterprise-wide identity management approach is required to protect this private information and to authenticate the identity of both Patients and Providers.

This concept of enterprise-wide identity management / authentication has direct benefit to all phases of the HIE environment. For example:

- Providers and patients who are accessing the system for the first time will have their identity authenticated and be screened for background events which would preclude them from participation, prior to issuance of credentials or access controls.
- Identities within the Arkansas MPI can be monitored for changes and updated; for Patients, items such as best address, telephone or name changes would be of importance; for authorized Providers, exclusion from participation in Medicare or Medicaid, licensing issues, or certain types of criminal convictions would trigger alerts and enable pro-active steps.
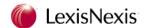
LexisNexis envisions a solution with which the SHARE can have full confidence in the identity of an individual, including Patients and Providers, while maintaining strict security over access and privacy of personal information, and performing ongoing identity fraud monitoring.

List of Current Installed Locations

LexisNexis does not have current Health Information Exchange Installed Locations. However, the LexisNexis proposed solutions are installed and leveraged by tens of thousands of government agencies across the United States, including

- Arkansas Office of Child Support Enforcement
- Arkansas Department of Children and Families
- Georgia Department of Community Health
- Florida Department of Children and Family Services
- Florida Department of Law Enforcement
- Texas Online

Additionally, LN provides identity verification services to numerous commercial health care and financial sector entities, including CVS pharmacies and others for whom references can be provided upon request.

Estimate of Implementation Timeline

The Implementation Timeline may vary greatly based on the Systems Integrator selected by SHARE, and the number of systems to be integrated. However, LexisNexis solutions are based on mature, proven products, significantly reducing risk to implementations and LexisNexis will work with the selected Systems Integrator to meet the State's required timelines.

Description of the Financial Business Models Supported

As a Software and Solution Provider, LexisNexis will work with the State and the selected Systems Integrator to support virtually any Financial Business Model.
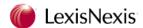
Suggested Service Level Agreement Terms

Typical Service Level Agreement Terms for LexisNexis solutions include minimum response times for search requests, and solution up-times.

Estimated Cost of Solution Components

Solution Component costs can vary greatly based on specific elements of the solution used, the number of systems included, and the number of transactions requested through the LexisNexis Solutions. The following table outlines the "List Price" for the proposed LexisNexis Solution components, without discounting for transaction costs, which will significantly reduce the overall cost to SHARE.

Solution Component	Pricing Description	List Price
LexisNexis Link ID	Per requested record for Link ID assignment	$ 0.02
Instant Verify	Per search or requested verification	$ 0.35
Instant Authenticate	Per search or requested authentication	$ 0.90
Provider Management	Per search or input record	$ 5.00

General Solution Description

LexisNexis Solutions support many of the key elements and requirements outlined in the RFI, including

- Interoperability
- Technical Architecture and Approach
- Design Principles and Requirements
- Core Requirements

Interoperability

LexisNexis fully supports SHARE's pilot project / phased approach to implementation of the Arkansas HIE to minimize implementation risk and promote implementation of technology and end-user adoption. LexisNexis Solutions are offered with no significant up-front fees on a transaction basis, maintaining cost in line with usage.

As outlined in the LexisNexis Solution Description section, below, LexisNexis offers industry leading solutions for the key elements of the Arkansas HIE, including

- Master Patient Index
- Master Encounter Index/Record Locator Service
- Identity Validation / User Security
- Secure Web-Based Portal Access

Technical Architecture and Approach

The LexisNexis Solutions fit squarely within the Technical Architecture outlined by SHARE in the RFI. Specifically, the LexisNexis entity resolution solution required for the Master Patient Index, Provider Index and Record Locator Service work seamlessly in a hybrid architecture federated decentralized data stores and a center "Hub".
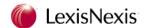
The proposed LexisNexis Identity Management Solution will allow SHARE to have confidence in the identity of each Patient and Provider using the HIE Network, and allow participants to be confident their health data is secure, private and accessed only when appropriate.

Design Principles and Requirements

LexisNexis solutions are based on open standards such as XML, and provide full interoperability with other vendor solutions.

Core Requirements

LexisNexis supports many of the Core Requirements outlined by the SHARE RFI, including the creation of a Master Patient Index and a Provider Index and Directory. In addition, LexisNexis products are standards-based, leveraging SOAP, XML and HTTPS for secure, interoperable solutions that are flexible enough to grow with the future needs of the Arkansas HIE Network.

LexisNexis Solution Overview

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Creating and Maintaining a Master Patient Index

The key function of a Master Patient Index is to uniquely identify each Patient and to match that Patient with their individual health records. This unique identification answers questions such as **"Is this Bob Jones the same as this Robert Jones?"** and **"Does this health record belong to Bob Jones or Robert Jones?"** In order to meet HIPAA, HiTech, and other regulations, these critical entity resolution questions must be answered accurately and correctly.

LexisNexis has a number of advantages in the area of entity resolution that, when taken in combination, allow LexisNexis to provide a solution with a level of sophistication unique in the industry. No other solution provider has the experience, reference data, algorithms and tools that LexisNexis has created.

LexisNexis has deep experience in linking together disparate records; the company has been in the information management business for 30 years and has worked with virtually every form of entity information possible. LexisNexis has experience linking its own data as well as billions of records of customer data.

Beyond simply creating a linking process, LexisNexis knows how to maintain an entity reference repository over time, managing the collapsing of multiple entities into a single one, or breaking apart an existing entity into multiple entities as new information is added to the repository. Given the range of quality in data sources available to be linked together, this approach enables a repository to stay current by constantly adapting to the new information.

Although there are many technologies and proposed solutions to the linking challenge of creating a master index, very few have been vetted against more than one real world dataset, and virtually none have been vetted against as diverse a set as the one LexisNexis maintains. Currently, LexisNexis' algorithms are used to link information from over 20,000 diverse data sets, with record counts measured in the billions. LexisNexis has extensive historical reference information about both people and businesses that provides a baseline of information to understand how people and businesses change their identity over time. This information not only provides immense real-world insight into linking massive collections of disparate data, but also provides an invaluable vetting tool to hone LexisNexis' algorithms.

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3. Disambiguating links by using associations with other entities (there are many John Smiths's, but very few that have ever lived at the same address as Collette Smith over the past 10 years).

Many vendor solutions are based solely upon the first type of linking algorithm. LexisNexis entity resolution is differentiated by its ability to leverage the statistical measurements in the entity domain and the associations that are present in the data.

A measure of the effectiveness of the LexisNexis matching algorithms is that they provide convergent solutions. In other words, as more and more data is added to the linking engine, the number of unique entities in the system approaches the actual population size of entities represented in the system. An example of this convergence can be found with the domestic Accurint reference repository. In 2004 the repository, just prior to being acquired by LexisNexis, contained over 3 billion unique records from over 2,400 data sources, representing 400 million unique entities. In 2006 after increasing the number of unique data sources to more than 9,000 and the number of unique entity references to over 6 billion, the number of unique entities only increased to 401 million. What this means is that the more data that the algorithms are able to process against, the greater success the algorithm will have. This is in stark contrast with other algorithms that deteriorate as the number of entity references increases, to the point where the false positives are overwhelming in the results.

For example, consider the following two theoretical Patients under consideration for a Master Patient Index.

SSN	DOB	NAME	ADDRESS	CITY	STATE	ZIP
***801594		Alexis K Bozza	25 Franklin PL	Miami	FL	33101
***801591	8/77	Alexis Young	114 W. 19th	Boca Raton	FL	33429

Using a traditional matching solution, these individuals have every indication of being two unique entities. They have a unique SSN, different last names, and completely different addresses. Under a traditional matching solution, these records would be treated as separate individuals, and their corresponding health records never linked.

However, under the LexisNexis Link ID solution, health records for an individual who has lived in many locations can be linked even without SSN and other key data because we already know an individual's demographic history, and can link new records based on that comprehensive knowledge. By leveraging this historical demographic information, significantly more data will

be used in the matching process such as shared address history, closely matching SSN, similar dates of birth, and 11 other data elements available through the LexisNexis repository. Given this massive repository of information, only available through LexisNexis, the Link ID solution correctly determines that these two "unique" individuals are, in fact, the same person.

Link ID#	SSN	DOB	NAME	ADDRESS	CITY	STATE	ZIP
1275602253	***801594		Alexis K Bozza	25 Franklin PL	Miami	FL	33101
1275602253	***801591	19770800	Alexis Young	114 W. 19th	Boca Raton	FL	33429
1275602253	***801594	00000811	Alexis K Bozza	15 E. Broad Street	Boston	MA	02134
1275602253	***801594	19770811	Alexis K Young	114 W. 19th	Boca Raton	FL	33429
1275602253		19770800	Alex Young	25 Franklin PL	Miami	FL	33101
1275602253	***801591	00770811	Alexis K Bozza	15 E. Broad Street	Boston	MA	02134
1275602253	***801594	197708	Alexis K Bozza	25 Franklin PL	Miami	FL	33101

LexisNexis capabilities provide the ingredients critical for the success of the SHARE HIE Master Patient Index and Record Locator Service, including

- An external reference source of 500 million accurately defined individuals (including deceased and certain foreign visitors)
- Unique national identifier (Link ID) already assigned to each individual
- >99.99% accuracy on individual identification
  - Most complete view of an individual since relevant records and record fragments are most likely to be linked, versus other approaches
  - Most accurate since unrelated records or record fragments will not be linked
- Ability to link records across time and geography since Link ID already has past address (and other) history associated with the individual
- Identify relatives and close associates
- Identify non-obvious relationships

Initial Population and Updates and Connection with Smaller MPIs
Using a batch process, the LexisNexis Link ID Number will be appended as the unique identifier and Record Locator on either centralized, federated or hybrid data sets, depending on the architecture. With the Link ID number serving as the unique identifier across the HIE network, this approach ensures the integrity and accuracy of each unique individual person entity contained in each Health Record system. This allows the State to quickly and easily eliminate duplicative records and resolve the identity of each entity within each data set.

As new data sets or records are added to the system, the Link ID process is periodically updated, incorporating this new information. The LexisNexis Link ID unique identifier serves as a de facto master patient index registry, the "golden record" which signifies the one true identity of the patient or provider within the system, secure and not subject to corruption.

Creating and Maintaining a Provider Index and Directory

The Master Provider Directory will be established and maintained in much the same way as the Master Patient Index, by leveraging Link ID numbers already present in the LexisNexis data repository to uniquely identify Providers.   Labs, Hospitals, RHIOs and other Medical Service Providers can submit Provider lists for inclusion in the HIE, which will be identified and provided a Link ID. This approach allows for simple updates to Provider information, and automated updates on information contained in the LexisNexis demographic and licensing repositories.

LexisNexis has nationwide demographic and licensing information on Medical Providers including data such as
- National Provider Identifiers and DEA Numbers
- Licensing Status and Sanctions with Details
- HHS OIG and GSA Exclusions
- Name, SSN, DOB
- Current / Best Contact Information (Phone and Address)
- Hospital Affiliations and Group Practices
- Association with Known Fraudsters/Excluded Providers
- Corporate Officers/Registered Agents

Additional information such as Physician Specialty and Board Certification can be appended using the Link ID as the unique identifier, as well as links to multiple practice locations, and Arkansas State Medical Board Licensing information.

Often, Providers who are sanctioned by one State simply move to a new State and set up practice. While not always fraudulent, these individuals pose risk to the security of a HIE solution. Using Provider Batch services, a HIE can perform periodic checks of all Providers in their database, flagging for deceased, sanctioned, non-licensed or excluded providers, and removing their access to the system.

This element of the LexisNexis solution is particularly critical when cross-state communication and Federal exclusions are considered. A hospital and physician just across the State line will require access to the HIE solution to treat patients from the HIE State, but the HIE State may not have access to the Provider's history. Without this historic information, the State cannot make an informed decision regarding allowing the Provider to access the HIE network.

Electronically Verifying the Identity of Patients and Providers, and
Securing Access to a Web-Based Portal

One of the key drivers for expanded utilization of health information exchange will be the ability for Providers and Patients to trust the system to keep their information secure and

deliver accurate results. These elements cannot be met merely through strong encryption, proper protocols, or traditional data matching methods. An enterprise-wide identity management approach is required to protect this private information and to authenticate the identity of both Patients and Providers.

This concept of enterprise-wide identity management / authentication has direct benefit to all phases of the HIE environment. For example:

- Providers and patients who are accessing the system for the first time will have their identity authenticated and be screened for background events which would preclude them from participation, prior to issuance of credentials or access controls.
- Identities within the SHARE MPI can be monitored for changes and updated; for Patients, items such as best address, telephone or name changes would be of importance; for authorized Providers, exclusion from participation in Medicare or Medicaid, licensing issues, or certain types of criminal convictions would trigger alerts and enable pro-active steps.

LexisNexis envisions a solution with which the SHARE HIE can have full confidence in the identity of an individual, including Patients and Providers, while maintaining strict security over access and privacy of personal information, and performing ongoing identity fraud monitoring.

This confidence is based on the industry-leading LexisNexis Instant Authenticate product suite, which provides the following.
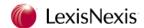
- Determine if the identity used by an individual exists (*“Is there a Bob Jones?”*)
- Determine if the identity used by an individual is actually the individual (*“Are YOU Bob Jones?”*)
- Determine if a Provider is appropriate for the environment (**“Is Bob Jones a Medical Provider with proper credentials?”**)

These Instant Authenticate solutions, delivered securely via XML, use a quiz-based approach leveraging LexisNexis data. Individuals attempting to access the system, request a login, or request a password change / replacement are presented with a series of configurable questions that determine the identity exists, and the individual owns that identity.

Once the identity is verified, the SHARE HIE allows the individual to continue their interaction based on established roles, such as creating/accessing existing Patient records, reviewing or updating Patient information, or other self-service applications. This approach can serve as a first step to any traditional one-factor or two-factor authentication, while providing additional security at various stages of the process.

Securing Access to a Provider Portal
Access to the Provider Portal will be secured using two of the approaches outlined above, the LexisNexis Provider Data and the Instant Authenticate solutions.
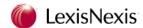
First, new Providers who request access to the HIE solution will have their identity verified using Instant Verify. Based on information entered by the Provider, LexisNexis will determine if the identity in question exists, is valid, and is a medical Provider in good standing.

Next, Providers will verify they "own" the identity they are claiming, through a series of questions provided by the Instant Authenticate solution. These questions are delivered securely via XML and are based on out-of-wallet information in the LexisNexis data repository, or data held by the State. Questions might include
- "Of the following 5 addresses, where have you never lived?"; or,
- "Which of the following vehicles have you owned in the past 5 years?"

Finally, the State will be notified of changes as new information on enrolled Providers becomes available. For example, if a Provider becomes deceased, loses their license, or is excluded from participating in Medicare. The State can then take appropriate action regarding the Provider's ongoing access to the HIE solution.

LexisNexis Product Overview

Identity Management: Instant Verify -- *"Does Bob Jones Exist?"*

Instant Verify is a real-time, interactive verification technology that determines whether the identity claimed by an individual actually exists.

Instant Verify is a real-time, interactive verification technology that determines whether the identity claimed by an individual actually exists. Instant Verify is able to identify the presence of any high-risk conditions. Certain factors have proven to indicate a higher risk of Identity theft than others (e.g. an address is a mail drop, motel, campground, or prison). By understanding those risk factors, a determination can be made as to the level of risk. Using LexisNexis's robust public records and proprietary databases Instant Verify verifies information across multiple databases and validates information such as name, address, date of birth and social security number, while identifying potentially high-risk data elements.
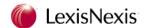
The LexisNexis data repository is then searched to verify the information provided by the end-user. The data is analyzed using judgmental or empirical scoring models designed to identify highly suspicious or contradictory findings, which have a high propensity of being the result of identity theft. After the data is analyzed, a score or index is developed to organize the data in categories for efficient decision making. The score or index is a high-level summarization of results, and categorizes the levels of identity theft risk. The scoring process can also take into consideration the lack of some information to verify identity. This identity verification process works for both face-to-face transactions and internet portal transactions.

LexisNexis knows identity theft perpetrators can adapt quickly, and our identity authentication tools are constantly examined and improved to defeat attempts to "game" the system and to identify emerging practices.

Instant Verify integrates easily into virtually any point-of-service or online system through a simple XML data interface. The solution works as a stand-alone verification tool within existing Web applications, such as the Provider Portal envisioned by the State.

Instant Verify:
- Instantly checks an individuals self-entered or self-provided information
- Verifies information against several derogatory databases, including high-risk addresses
- Integrates quickly into existing business processes, third-party, and other Web sites software or hardware.
- Remains transparent to the user.
- Offers integration with the Instant Authenticate workflow, allowing customers to determine next steps based on verification outcome.
- Supports both real-time and bulk data file submissions.
- Provides flexibility to specify number of verification checks required to "pass" verification module.

Identity Management: Instant Authenticate -- *"Are you Bob Jones?"*

Instant Authenticate is a real-time, interactive verification technology that provides further verification that an individual is who he/she claims to be - making authorization or access privileges simple, swift and secure. Using robust data sources, not just wallet-based, credit or financial history information, Instant Authenticate generates an interactive, multiple-choice knowledge-based questionnaire, using more than 30 years of unique identifiers, such as property, telephone and address history.

The Instant Authenticate Question Engine
Perhaps the most unique element of the Instant Authenticate solution—and what sets Instant Authenticate apart from the competition—is it's fully enhanced, dynamic decisioning engine. This next-generation engine offers the ultimate in authentication control.

The Instant Authentication process uses independent business or consumer data to verify the Patient or Provider with which the SHARE HIE will interact. LexisNexis' sophisticated identity authentication tools use personally identifying information that is time sensitive, such as past and present address and phone numbers; dates of birth, marriage or death (an imposter may not realize the false identity is actually that of a deceased individual); or "out-of-wallet" information such as information about a previous car or previous residence.

Finally, the required level of authentication may vary by use. For example, what may be required to authenticate a person applying for a mobile phone will differ from the authentication required of a person opening a bank account. Decision makers can use the scores or indices provided by authentication models to develop the correct procedures and policies to ensure security of the system.

With Instant Authenticate, the agency can control the frequency of the different question categories used in each quiz, as well as determine how often those questions appear and the weight given to each correct answer. As a result, no two configurations will ever offer the same experience. Instant Authenticate brings uniqueness to the identity authentication process.

The Instant Authenticate question library has been greatly expanded, to include categories such as relative and government identifier questions. This expansion has strengthened the integrity of the process, making it more difficult for fraudulent users to attempt to pass and service broader demographics. In addition, SHARE can leverage its own data sets to generate questions for Patients and Providers, such as "Which of the following doctors did you visit last week?" Or, "Who is your primary care physician?"

Instant Authenticate also allows SHARE to give certain questions more weight than others, rather than having each question carry the same weight in the final scoring process.

This multi-data approach to identity authentication using the LexisNexis decisioning engine is superior to credit record searches because LexisNexis Instant Authenticate does not rely solely on these traditional sources.

Instant Authenticate Features & Benefits

- Generates unique questions from multiple non-credit data sources
- Presents a very simple XML interface
- Creates a highly customizable and flexible tool
- Provides quiz configurations that can be modified to client's needs
- Users can select or modify:
  - The type of data sources used
  - The level of verification
  - The type and number of questions utilized
  - Number of correct answers for a "pass" score
- Generates different questions and answers each time
- Uses LexisNexis public records assets – offering unmatched data breadth, coverage and currency
- Allows integration with agency-supplied data

Instant Authenticate is the industry leading identity authentication solution —above and beyond traditional knowledge-based authentication.

Master Provider Index and Secure Provider Portal: Provider Solutions -- *"Is Bob Jones a practicing physician?"*

LexisNexis offers the information and technology to help government health care programs proactively prevent Providers with unsatisfactory backgrounds from ever participating in the State's Medicaid programs, even within "any willing Provider" environments. Many state Medicaid programs currently perform only minimal background checks, or only review against the Department of Health and Human Services OIG exclusion list. Once Providers are enrolled, they are often not checked again until re-enrollment, and in some states, never checked again. These types of policies leave the door wide open to those who wish to defraud or abuse the system, sapping desperately needed resources from legitimate programs.

LexisNexis offers nation-wide data on Provider licensing, including expiration, suspension or revocation, and Federal Exclusions by the GSA and OIG. LexisNexis can continually monitor and update SHARE to changes in nationwide State and Federal databases related to a Provider's license and standing, including
- License Expiration, Suspension or Revocation
- Federal Exclusion Lists
- Criminal Action

- Other Disciplinary Actions
- Association with Known Fraudsters/Excluded Providers
- Changes of Ownership, Address, etc. for Corporations

Based on a schedule determined by SHARE, or in real-time as LexisNexis receives the information, LexisNexis can continually monitor and update SHARE of any changes to a Provider's information that could impact their eligibility to participate in the HIE Network. For example, an e-mail or other notice would be sent to SHARE if a Provider was disciplined in another State, or added to a Federal Exclusion list.

Master Patient and Provider Index: Link ID – *"Are Bob Jones and Robert Jones the same Person?"*

LexisNexis Link ID is a powerful entity resolution and data linking technology. This core technology, unique to LexisNexis, is the key to our daily management of 585 Million unique identities from 20,000 data sources across 33 Billion records.
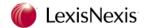
LexisNexis' award-winning data linking technology is used by tens of thousands of State, Local and Federal Agencies across the United States, supporting millions of daily transactions with sub-second response times.

Leveraging Link ID, the State can perform complex data linking involving matching records not just against one measure, but up to 14 different data elements in a person's data makeup, each with their own variances and nuances. Ongoing, Link ID will help the State track the movement of people and businesses, despite name changes, mangling, or inconsistent use of names, or missing information.

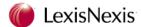### Unparalleled Data Linking Technology

LexisNexis has more than 30 years of experience in the information and data management industry. On a daily basis, LexisNexis manages the creation and updates of up to 3 Billion public records spread over 585 Million individuals. LexisNexis knows how to maintain a reference repository over time, manage the collapsing of multiple entities into a single one, or break apart an existing entity into multiple entities as new information is added to the repository. No other solution provider has the experience, reference data, algorithms and tools that LexisNexis has created to link information.   The LexisNexis Link ID technology gives LexisNexis this ability.

LexisNexis Link ID is an advanced linking and analysis technology that works behind the scenes in LexisNexis risk solutions. LexisNexis Link ID employs patented algorithms to provide customers with a single, consolidated view of each of the unique identities contained within their disparate repositories of person and business-centric information. Data linking is a complex process that involves matching records not just against one measure, but up to 14 data elements in a person's data makeup, each with their own variances and nuances. The result of this process creates a unique identification number-the Link ID number-for each entity,

which is then used to link together information from disparate databases on an individual or business.

The LexisNexis Link ID technology offers a safe and viable replacement for traditional means of identification. The Link ID number is a non-SSN, non-FEIN-dependent identifier that is utilized to bring together information from disparate databases and create an up-to-date profile for an individual or a business. The use of a Link ID number not only simplifies requirements for customer setup and verification, but also serves as an innocuous identifier which adds value across the entire HIE network and provides a complete picture of an individual or Provider, leading to more accurate, timely, and informed decisions.

Summary

LexisNexis offers more than the most comprehensive collection of public records and unparalleled ease of use features. LexisNexis also offers comprehensive Identity Management and Verification solutions unsurpassed in the industry, and award-winning linking technology leveraged across tens of thousands of data sources managing hundreds of millions of unique identities.

LexisNexis looks forward to working with SHARE to define and implement the requirements of the Arkansas Health Information Exchange Solution, resulting in a secure exchange of health records with strict limits on meaningful use and ultimately better outcomes for Arkansas patients.